International Journal of Physical Education and Sports
www.phyedusports.in
Volume: 2, Issue: 8, Pages: 04-07, Year: 2017
Impact Factor: 3.125 (RIF)

ISSN- 2456-2963

Effect of selected yoga program on oxygen saturation level of secondary school students

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Received July 25, 2017; Accepted Aug 21, 2017; Published Aug 25, 2017

Abstract

Background: Yoga brings stability to the body and the wavering mind. In order to accomplish it, Yoga makes use of different movements, breathing exercises, relaxation technique and meditation. Yoga is associated with a healthy and lively lifestyle with a balanced approach to life. Yoga science of breathing is called pranayama. Oxygen is the most vial nutrient to our body. It is essential for the integrity of the brain, nerves, glands and internal organs. It is a systematic exercise of respiration, which makes the lungs stronger, improves blood circulation makes the man healthier and bestows upon him the boon of a long life. **Purpose:** The purpose of this study is the effect of yoga on oxygen saturation level in secondary school students in Pune city. **Setting and Design:** A total number of 50 subject's secondary school the age of the subject ranged from 14-16 is selected .Experimental test was used. **Methods:** The current study was to study the effect of yoga on oxygen saturation level in secondary school students by using dependent t- test. **Statistical Techniques:** dependent t-test was applied to find out the significance difference between the groups in Multidimensional fatigue variable & the level of significance was set at 0.05. **Result:** There were significant relationship between Yoga and Oxygen saturation. **Conclusion:** Hypotheses have been rejected as the results of the study illustrated there was a significant relationship between Yoga and Oxygen saturation as the calculated 't' is greater than tabulated 't'13.37>2.0096.

Key words: Yoga, oxygen, saturation.

1. Introduction

Yoga is a spiritual technique and system of philosophy, but it is also the oldest and most thoroughly tested form of physical and mental exercise known as humanity. Yoga breathing is considered an intermediary between the mind and body. Yoga breathing owes their great potentials to prana. Regular practice of yoga breathing gives maximum benefits through complete and comprehensive utilization of the prana system.

Yoga science of breathing is called pranayama. Oxygen is the most vial nutrient to our body. It is essential for the integrity of the brain, nerves, glands and internal organs. It is a systematic exercise of respiration, which makes the lungs stronger, improves blood circulation makes the man healthier and bestows upon him the boon of a long life. It aids the respiratory system function at its best whereby the life force can be activated and regulated in order to go beyond one's normal boundaries or limitations and attain a higher state of vibratory energy.

1.1 The problem and its social relevance

The present study is a resource material for the understanding the physiological benefits of yoga on teenagers. These children are the bright future, on them lays a heap of responsibilities. The results of study may help to find out the effect selected yogic exercises on oxygen saturation level and if the outcome is positive than without any doubt yoga can be use as the best remedy for recovering oxygen saturation level as it does not have any side effect. The results of study would help the educational planners to realize the necessity of yoga in school and colleges. It would also help to find an alternate solution to the above mentioned problem through yoga without any side effects.

1.2 Hypothesis

There may not be any significant relationship between Yoga and Oxygen Saturation

2. Methodology

2.1 Subjects

A total number of 50 subjects secondary school The age of the subject ranged from 14-16 is selected.

2.2 Tool used

Standard designed Six week training program on pulse Oxygen of Pre-test and Post Test of Experimental group.

2.3 Procedure

A total number of 50 subjects (N = 50) of secondary school and were further analyzed by using 't' test and Pre-test and Post-test means of the group to find out the difference among the selected variable in secondary school students. The data collected on 50 subjects before and after six week training program on pulse Oxygen and was analyzed by comparing the mean of Pre-test and Post Test of Experimental group and was again statistically analyzed by applying the dependent "t" test to check the difference among selected variable.

3. Results

The purpose of the study was to find out the effect of six weeks (42 days) yogic Training Programmed on oxygen saturation level of secondary school students. The data were collected qualitatively by using pulse Oximetry test on 50 subjects (N = 50) of secondary school and were further analyzed by using 't' test and Pre-test and Post-test means of the group to find out the difference among the selected variable in secondary school students of Pune city.& the level of significance was set at 0.05.

3.1 Findings

The statistical results of 50 subjects before and after six week training program on pulse Oxygen and was analyzed by comparing the mean of Pre-test and Post Test of Experimental group and was again statistically analyzed by applying the dependent "t" test to check the difference among selected variable. Therefore separate tables and graphs have been drawn for each item as follows

Table no. – 1

Comparison of Pulse Oxygen during Pre-test and Post-Test

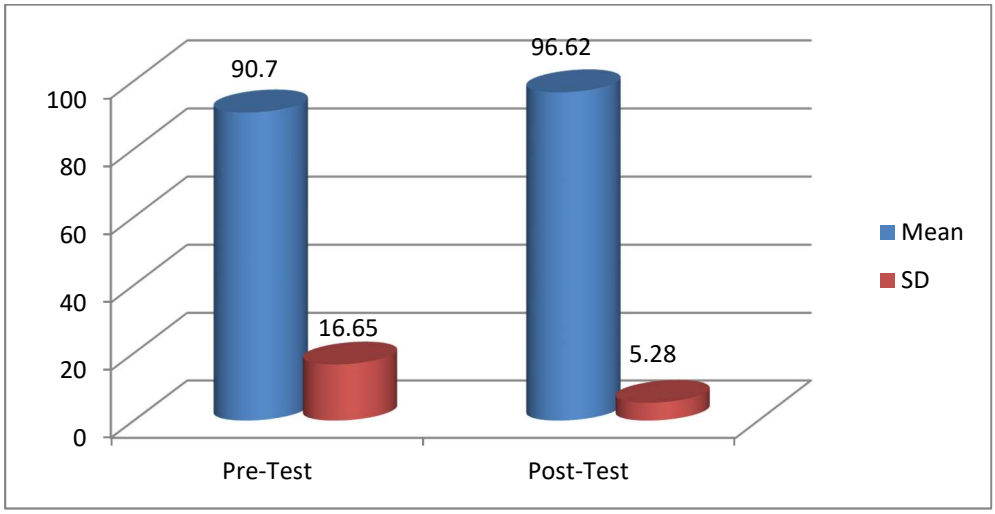
Test	N	Mean	SD	DF	Cal 't'.	Tab 't'.
Pre-test	50	90.7	16.65			
				49	13.37	2.0096
Post-Test	50	96.62	5.28			

Level of Significance = 0.05 Tabulated't' (49) = 13.37

Table 1: Represents the mean and Standard deviation of pre-test and post test on Pulse Oxygen. Reveals that there is significant difference between the mean of pre-test and post-test of the selected group as the mean difference 5.92.

The finding of this test shows that there is significant difference between the mean of selected group (pre-test and post-test), as the calculated 't' value of 13.37 is higher than the tabulated 't' value of 2.0096 (49 degree of freedom at 0.05 level of confidence).

Figure – 1
Mean and SD of Pre-test and Post-Test



4. Discussion of hypothesis

The result of the study had exclusively shown that there was a significant effect of selected yogic exercises on Pulse oxygen after six weeks training program on secondary school students as the calculated 't' was greater than the tabulated 't' i.e. 13.37>2.0096.

Therefore hypothesis stated earlier is have been rejected as the results of the study illustrated there was a significant relationship between Yoga and Oxygen saturation as the calculated 't' is greater than tabulated 't'13.37>2.0096.

5. Conclusion

Following conclusions were drawn in the light of results.

- The result of the study had exclusively shown that there was a significant effect of selected yogic exercises on Pulse oxygen after six weeks training program on secondary school students as the calculated 't' was greater than the tabulated 't' i.e. 13.37>2.0096.
- As the subject had taken the training Schedule seriously, the effect was positive and there was significant rise in the blood oxygen level of the students. From the conduction of this study, we can assume that instead of medication we can rely on the Yogic exercises for the betterment of our health which is a natural remedy.

Bhattacharya et al. found that the modern living lifestyle is known to produce various physical and psychological stresses and subject the individual to produce oxidative stresses as well. The aim of this study has been to assess the effect of yogic breathing exercises (pranayama) on the oxidative stress. The study group consisted of 30 young male volunteers, trained for the purpose of this study and an equal number of controls were used. The free radicals and Super oxide dismutase levels were measured before the study and at the end of the study. The free radicals were decreased significantly in the study group but the SOD was increased insignificantly as compared to the control group. Yogic breathing exercises not only help in relieving the stresses of life but also improve the antioxidant status of the individual. An improvement in the antioxidant status is helpful in preventing many pathological processes that are known with impaired antioxidant system of body.

Zijlstra WG et al. studied that Oxygen saturation (SO2) should not be confused with oxyhaemoglobin fraction (FHbO2). As automated multiple wavelength photometers may yield both SO2 and FHbO2, care should be taken that only SO2 is used in checking the results of pulse Oximeter. Arterial SO2 is the quantity aimed at by pulse Oximeter. Although the accuracy of the measurement may be less than that of the analysis of an arterial blood sample in vitro, the measured quantity remains SO2. Using a special symbol, like SpO2, obscures this fact and should be discouraged.

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